

such as *Cistus* and tall heaths; this was, no doubt, due to the great heat on the bare rocks which attracted them. It was not an easy hunting ground, and string-soled canvas boots called "alpargatas" were almost a necessity.

January 10th.—*Macroglossa stellatarum*. In previous years these were swarming. I have taken several, they were not in very good condition; hibernated specimens. *Pyrameis atalanta* (one). 12th.—*Cyaniris argiolus* (one), *Pyrameis cardui* (one). 18th.—*P. atalanta* (one).

February 1st.—*P. atalanta* (one), *C. argiolus* (one). 2nd.—*P. atalanta* (one), *Lycæna telicanus* (two). 3rd.—*P. atalanta* (one), *L. telicanus* (two), *C. argiolus* fairly numerous. 5th.—*Pararge egeria* (one), *P. atalanta* (one), a few *C. argiolus* about. 6th.—*P. egeria* (one), *L. telicanus* (one). 7th.—*L. telicanus* (one), *P. atalanta* (one). 8th.—*Pararge megæra* (two), *L. telicanus* (three). 9th.—*C. argiolus* (one), fresh hatched. 11th.—*C. argiolus* (two). On February 12th, 1913, I took a female *L. baticus* freshly emerged; this year I did not see this species. 14th.—*L. telicanus* (three), *P. atalanta* (one), *C. argiolus* (three), *Colias edusa* (one). 15th.—*P. daplidice* taken (two), a few others seen, *C. argiolus* (one seen). 16th.—*Callophrys rubi* (one), *P. daplidice* (one, male), *L. telicanus* (one), *Gonepteryx cleopatra* (one male). 18th.—*P. daplidice* (one). 19th.—*M. stellatarum* (one), *C. argiolus* (one, female), *P. egeria* (one), *P. megæra* (one), *P. atalanta* (one), *C. argiolus* numerous. 21st.—*P. egeria* (one). 26th, and 28th.—*Cænonympha pamphilus*, one each day.

March 1st.—*C. edusa* (one), *P. daplidice* (two), *P. megæra* (one), *G. rhamnii* (one), *C. rubi* (one), *C. argiolus* numerous. 2nd.—*Pieris brassicæ* (one male fresh from chrysalis), *P. rapæ* (two, just emerged), *P. daplidice* (one), *P. egeria* (two), *P. megæra* (one). 3rd.—*P. rapæ* (one, freshly emerged), *P. egeria* (one), *L. telicanus* (one, worn). 4th.—*C. rubi* (one), *C. pamphilus* (one), *P. megæra* (one), *C. argiolus* and *P. daplidice* numerous. 5th.—*G. cleopatra* (one, male), *C. rubi* (two), *P. cardui* (one), *L. telicanus* (one). 6th.—*P. machaon* (one), *G. rhamnii* (one, female), *P. daplidice* (one), *P. rapæ* (four, three males, one female), *P. megæra* (one female). 7th.—*G. cleopatra* (one, male), *G. rhamnii* (one, female), *P. daplidice* (one, female), *C. rubi* (one), *L. telicanus* (one). 8th.—*G. cleopatra* (one, male). 9th.—*C. pamphilus* (one). 10th.—*P. daplidice* (one), *P. egeria* (one), *P. rapæ* numerous.

On March 11th we left for the Port of Alcudia, situated in a magnificent sandy bay in the east of the island, where the scenery differed very much from Cas Catala. There are extensive flat lands, where formerly rice was grown, with numerous dykes and large lagoons of brackish water, bounded on the north and south by hilly land, with plenty of wild vegetation. The weather was very hot and at times very windy.

March 14th.—*G. rhamni* (one, female), *C. rubi* (two), several *M. stellatarum* about, *P. rapæ* (one). 16th.—*C. rubi* were swarming in a ravine; I took several, and caught a great number for inspection, hoping to find *C. avis* amongst them, but my search was unsuccessful. 26th.—*C. rubi* (three), *G. cleopatra* (one, male), *C. phlæas* (one), *P. megera* (one, female), *P. machaon* (one). 27th.—*C. rubi* (three). 28th.—*C. rubi* (one); a few *P. daphidice* seen. 29th.—*L. icarus* (one, male), *G. cleopatra* (two, males), *G. rhamni* (one, female), *C. rubi* (two). 30th.—*L. icarus* (two, one male and one female). 31st.—*C. pamphilus* (one), *C. rubi* (one), *G. rhamni* (one, female), *P. megera* (one, female), *G. cleopatra* (one, male).

On April 11th we left for Palma *en route* for Barcelona. Whilst in Barcelona I visited the museum, which is anything but up to date; the collection of insects was in glass cases exposed to the light, and they were mostly faded out of all recognition.

Elstead Lodge, Godalming.

GYNANDROMORPHOUS SPECIMEN OF *ABRAXAS GROSSULARIATA*.



THE above figure represents an exceedingly interesting specimen of *Abraxas grossulariata* which was reared last season by Mr. R. Tait, junr., of Ashton-on-Mersey. He writes:—"It came from a batch of Huddersfield larvæ, the progeny of light pairings, and was practically the only specimen out of some five hundred of the same batch worth keeping."

We incline to the opinion expressed by Mr. Tait that the insect is gynandromorphous. Judging from the photograph, we should say that on the left side the insect is male and on the right side, female. So far the genitalia have not been critically examined. If this were done, gynandromorphism would probably be found complete.

NEW SPECIES OF HETEROCERA FROM FORMOSA.

By A. E. WILEMAN, F.E.S.

GEOMETRIDÆ.

Euchlæna (?) *lilacina*, sp. n.

♂. Head and collar dark reddish brown, thorax and abdomen grey brown; antennæ ciliated. Fore wings bluntly angled about middle of termen, apex slightly produced; grey brown tinged with lilacine, costa sprinkled with black, discoidal spot black; postmedial line dark brown, oblique, outwardly pale edged, indistinct towards the costa; terminal line black, lunular; fringes pale. Hind wings angled on middle of termen; grey brown, tinged with lilacine; medial line dark brown, inner edge diffuse, outer edge pale; terminal line dark brown, interrupted at veins towards the costa; fringes pale. Under side pale brown, suffused with fuscous, discoidal spots black; traces of a dusky medial and postmedial lines indicated by black dots on all the wings.

♀. Termen of all the wings crenulate, angled at middle; the apex of fore wings more acuminate than in the male. Colour and marking agree with these characters in the male, except that the medial line on under side is more distinct.

Expanse, 36 millim. ♂; 40 millim. ♀.

Two male specimens from Kanshirei, one taken in May and the other in July, 1908. The July specimen has been described, the May specimen is rather browner in colour and the transverse lines are somewhat broader.

The female type, also from Kanshirei (Wileman), is in the British Museum.

Zethenia crenulata, sp. n.

♂. Head pale brown, thorax dark brown, darker behind; abdomen whitish speckled with dark brown and tinged with ochreous on the posterior edges of segments; antennæ ciliated, whitish marked with dark brown on basal third, and dark brown marked with whitish on remainder. Fore wings whitish sprinkled and clouded with purplish brown, costal and dorsal areas, also the venation, tinged with ochreous; antemedial and medial lines purplish brown, oblique, obtusely angled below costa; postmedial line formed of black dots on the veins, the costal three largest; space between medial and post-medial lines clearer of brown sprinkling than other parts of the wing; subterminal line blackish, white marked, only distinct towards the costa, followed by a short streak from the apex. Hind wings whitish sprinkled and clouded with purplish brown, the clouding chiefly on basal and terminal areas; discoidal spot black, medial line purplish brown, attenuated towards costa; postmedial line represented by black dots on the veins. Under surface similar to the upper side.

Expanse, 46 millim.

Collection number, 1886.

A male specimen from Arizan (7300 ft.), August, 1908.

Comes near *Z. inaccepta*, Prout, but the termen of all wings crenulate, deeply on the hind wings.

Arichanna flavincta, sp. n.

♂. Head pale ochreous brown, antennæ bipectinated; thorax black brown, mixed with pale ochreous brown; abdomen pale ochreous brown, barred with black brown. Fore wings yellowish white, dotted and clouded with blackish, the clouding heavy and more or less confluent on basal half; costa and termen marked with yellow; two white spots, separated by a vein only, before the apex; an irregular edged blackish band from the lower spot to dorsum, the band traversed by an irregular brown line. Hind wings creamy white inclining to yellowish, densely dotted with blackish; discoidal spot blackish, large, its lower edge connected with a blackish band running to dorsum; subterminal line blackish; irregular and interrupted. Fringes of all wings blackish marked with yellow. Under side very similar to the upper side.

Expanse, 50 millim.

Collection number, 1818.

A male specimen from Rantaizan, May 7th, 1909.

Arichanna ochrivena, sp. n.

♂. Antennæ bipectinated; head and thorax blackish brown, the latter ochreous mixed; abdomen paler brown, suffused with fuscous on the back. Fore wings whitish, tinged with ochreous on the disc; costa and veins ochreous; subbasal, double antemedial, and double postmedial lines represented by black spots, costa striated with black, discoidal mark black, large; subterminal line represented by round black spots; a series of quadrate black spots on the termen, some towards costa united with subterminal series; fringes ochreous marked with black. Hind wings ochreous, suffused with blackish towards the base; discoidal spot black, almost round; medial line represented by five black spots, first on costa, second in line with discoidal; postmedial line represented by five black spots, the first between veins 4-6 and in line with the discoidal, the second minute, and the fourth and fifth hardly separate; seven black spots on the termen, the fourth, fifth and sixth larger than the other four. Under side ochreous, black spots as on the upper side.

Expanse, 56 millim.

Collection number, 1552.

A male specimen from Arizan, August 18th, 1908.

Closely allied to *A. hamiltonia*, Swinhoe.

Perizoma rantaizanensis, sp. n.

♀. Head white, mixed with black; thorax black, mixed with white, collar brown tinged; abdomen dark grey, brown marked. Fore wings white, flecked with grey brown; basal patch black, limited by an almost straight white line; antemedial line black, slender, excurved to median nervure, thence almost straight to dorsum; space between subbasal and antemedial line brownish;